



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



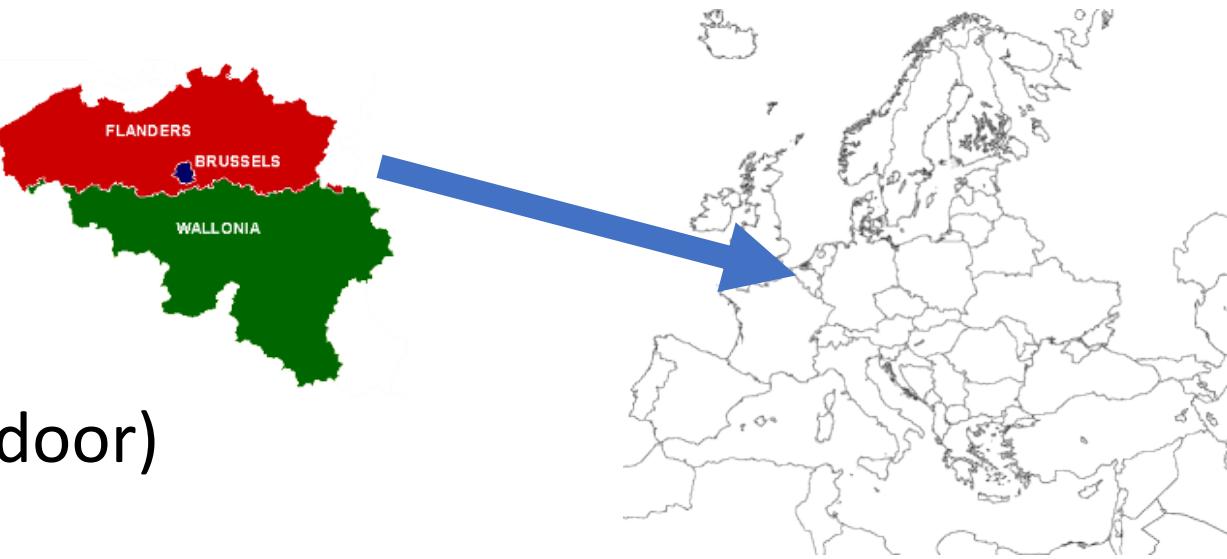
Sarah lives in Flanders, BE

Has a 25 km commute

Always wants to be **on time**

Insists on a **max 1 hour** commute (door-door)

Mobility options?





# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



Can speed pedelecs really fulfil  
the mobility needs of daily  
commuters?



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## 365SNEL-project

Goal:

**Can the speed pedelec be a 365-days commuting vehicle?**

- Project duration: Mar 2018 – Mar 2020
- Ten companies in Flanders (8/10 done)
- 3 weeks of use, ±10 test persons
- Information captured: surveys + GPS logging

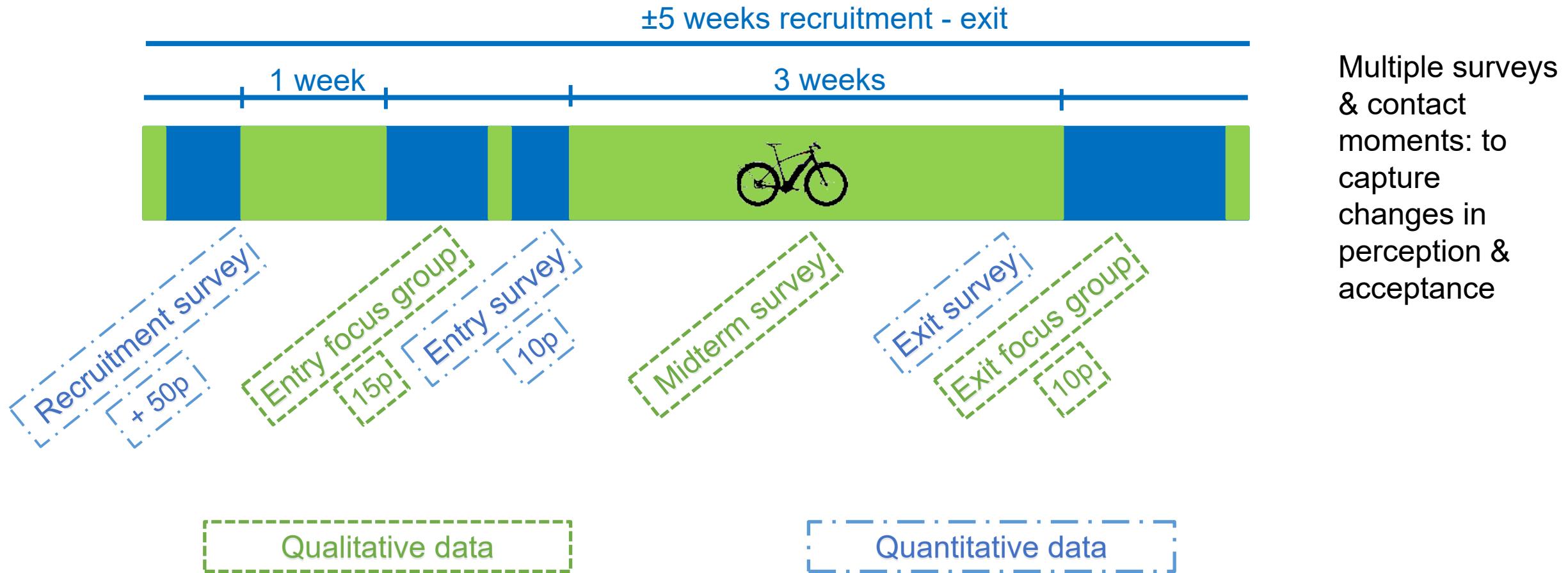




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## Research design





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## Interested parties



50  
50 interested organisations

8 selected organisations



457 interested individuals



Average age



21.5 km



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## Selection criteria

15 km < Commuting distance < 35 km

Age & gender representative to the sample

No prior experience with speed pedelecs



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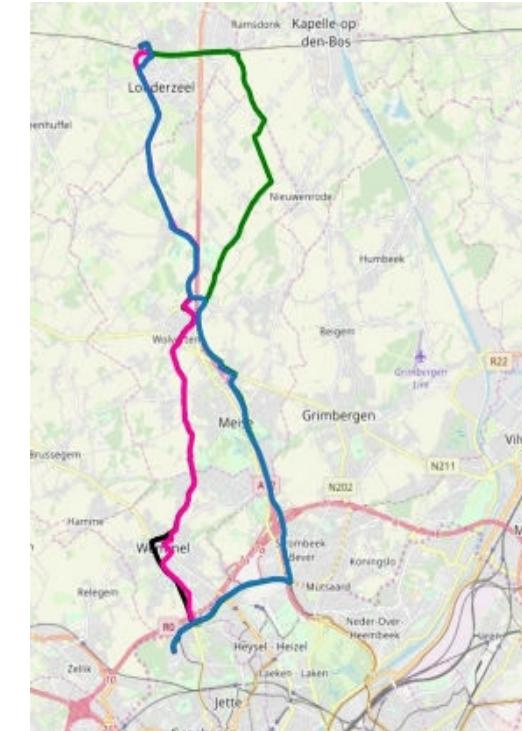
## Preliminary results



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## Types of riders



***“onservative***



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## Themes & feelings

### Before

Ease of use

Health effects

Safety

Speed Time management

Traffic regulations

Ease of use

Speed Safety

Price

Health effects

Time management

Technical aspects



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## Quantitative surveys

Comparison of means before and after the test

No functional problems

Reliable

Dangerous in traffic

45 km/h is too high for me

Willing to buy

Positive for environment

Decrease body weight

Improve physical condition

Shorten travel time

Totally  
disagree

Disagree

Neutral

Agree

Totally  
agree

After   Before

Standard deviation increases  
**Opinions diverge on  
reliability!**

**Quality?**

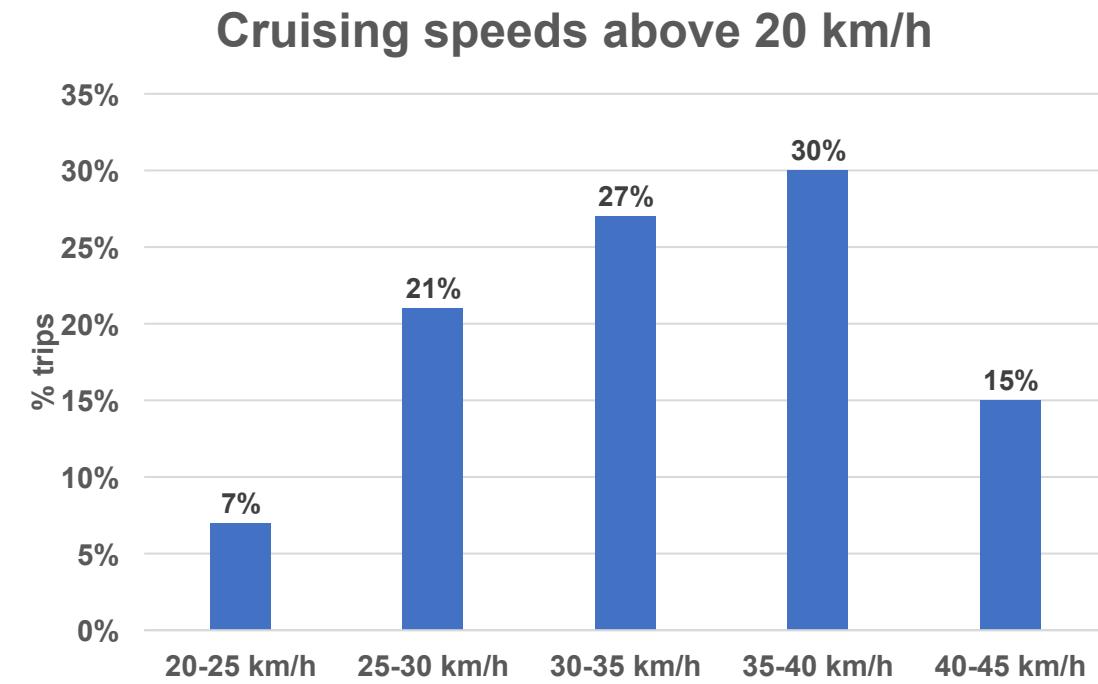
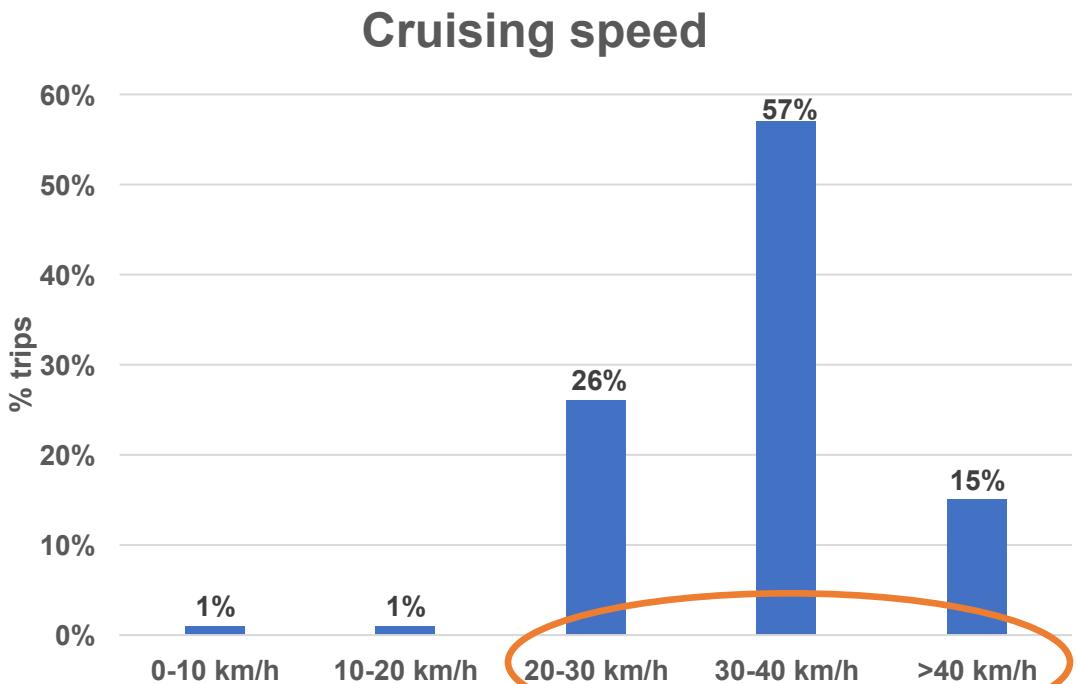
**Still willing to buy!**



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## Cruising speeds



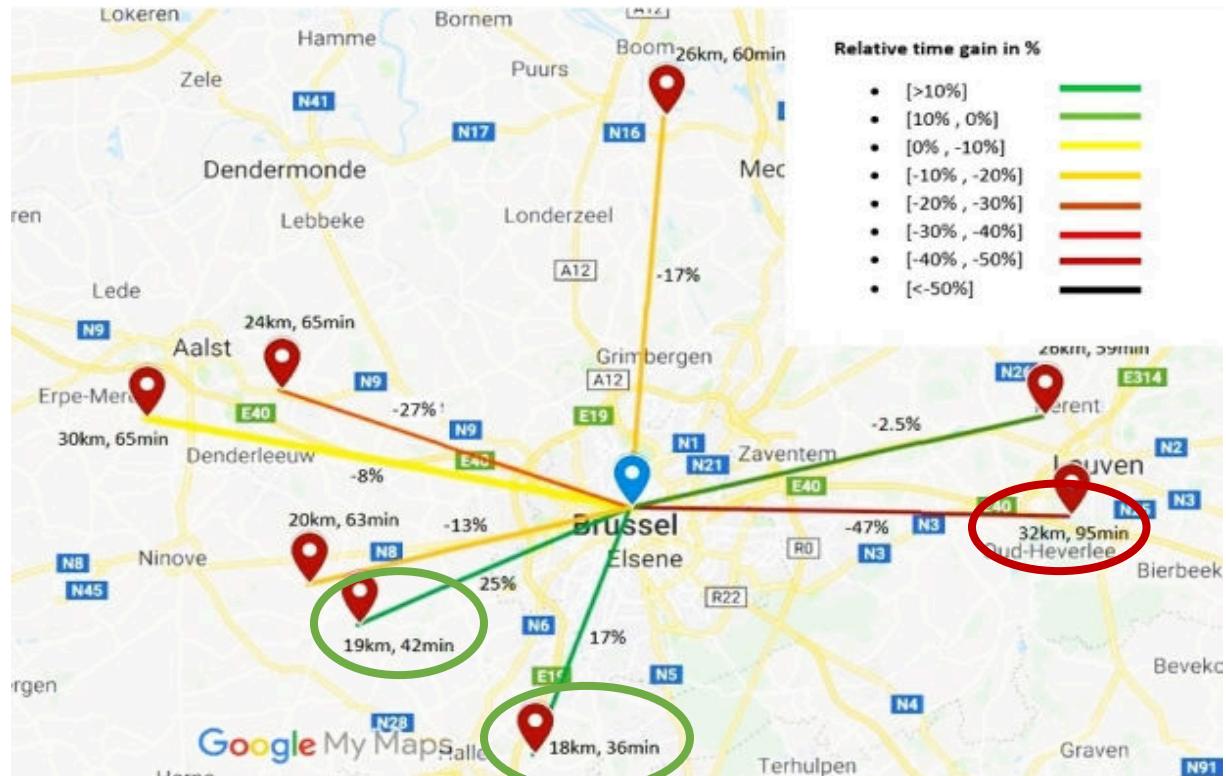
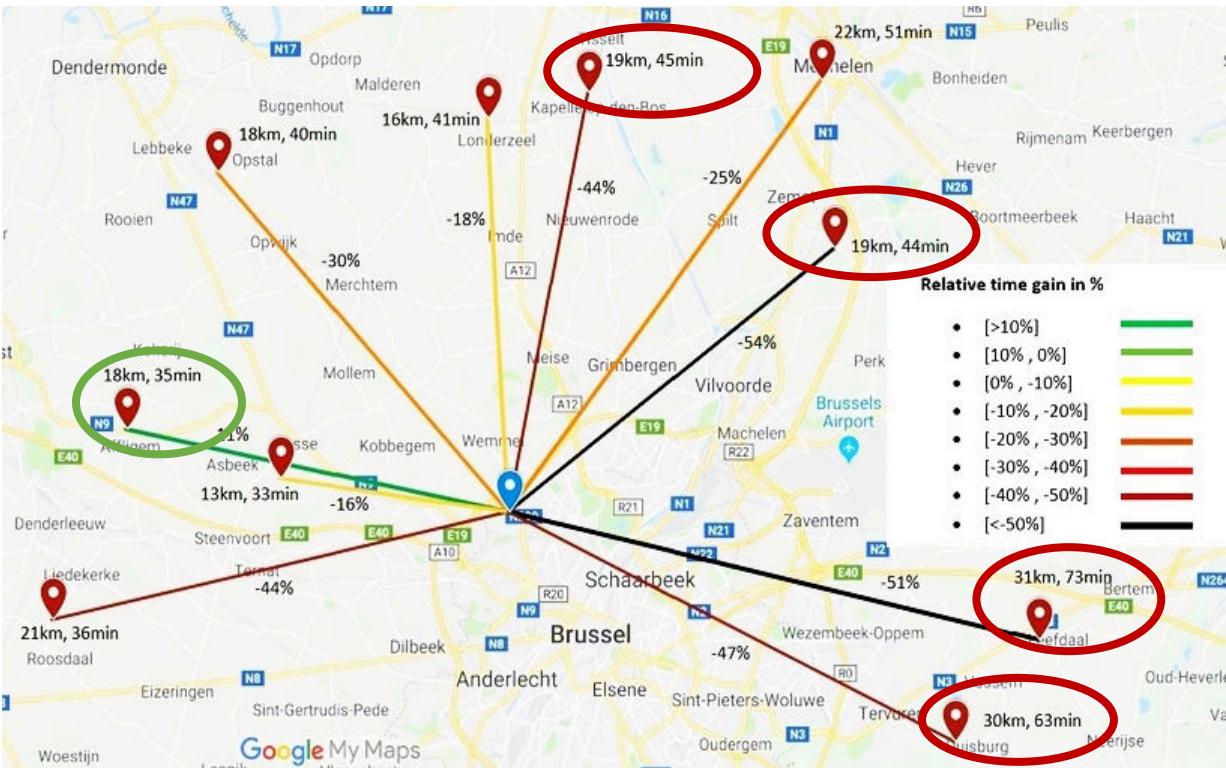


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## Time gain vs time loss

- Time gain is relative: where you live & work matters





# Preliminary Conclusions

- Different **types** of users
- **Price** is important
- Questions to be asked about **reliability**
- More than 50% of the time, a cruising **speed** between 30 & 40 km/h
- **Time gain** depends on where you live & work



# Preliminary Conclusions

**Can speed pedelecs really fulfil the mobility needs of daily commuters?**

**YES!**

But: it depends where you live **and** work (infrastructure, weather, day, departure time)

Further analysis needed:

- Quality of the speed pedelec
- Consumer acceptance
- Spatial temporal analysis



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## Thank you

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## More context

- Belgium: problems regarding air quality & road congestion
- Improvement possible: reducing car use (EU Commission )  
=> *difficult: cars and congestion growing to date [1]*
- Switch to LEVs: 5 times more energy efficient [2]
- In Flanders: speed pedelecs could be a solution  
→ registration data (16 000 speed pedelecs vs 6000 BEV registered in 3 years)
- => 365SNEL project

[1]: Touring "Filebarometer 2018" – <https://www.touring.be/nl/pers/touring-mobilis-belgen-staan-meer-en-meer-de-file-tijdens-daluren>

[2]: Stevens et al. "Het potentieel van licht elektrische voertuigen in Vlaanderen" - <https://iiw.kuleuven.be/apps/lev/eindrapport.pdf>

